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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,110	09/12/2000	Thomas P. Hardjono	2204/A45	6748

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EXAMINER	
CHOUDHURY, AZIZUL Q	
ART UNIT	**PAPER NUMBER**
2145	

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/660,110	HARDJONO ET AL.	
	Examiner	Art Unit	
	Azizul Choudhury	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6-15 and 17-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6-15 and 17-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/30/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

This office action is in response to the correspondence received on May 22, 2006.

Drawings

The corrected drawings were received on May 22, 2006. These new drawings are accepted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-15 and 17-57 are rejected under 35 U.S.C. 102(b) as being anticipated by Araujo et al (US Pat No: 6,097,720), hereafter referred to as Araujo.

1. With regards to claims 1, 4, 15, 28, and 42, Araujo teaches, a multicast communication system comprising a plurality of subscriber locations (column 2, lines 21-56, Araujo), each subscriber location having an access device (equivalent to intermediate device, column 2, lines 21-40, Araujo) through which a number of subscriber (equivalent to multicast receiving end station (CPE) (column 2, lines 21-40, Araujo)) devices access multicast information sent by a multicast distribution device (equivalent to multicast source end station (RAS) (column 2, lines 21-40, Araujo))

wherein each access device acts as a sole multicast receiver for its respective subscriber location and distributes multicast information received from the multicast distribution device to the subscriber devices at its respective subscriber location (column 2, lines 43-56, Araujo), wherein each said access device acts to join and leave at least one multicast group on behalf of the subscriber devices at its respective subscriber location, and wherein each said access device processes a join request from one of said subscriber devices by determining whether said access device is already joined to a multicast group indicated by said join request (column 6, lines 40-57, Araujo), and, in the event that said access device is not already joined to said multicast group indicated by said join request, sending a join request to said multicast distribution device (column 2, lines 21-56, Araujo), wherein said joining said multicast group by said access device on behalf of said first subscriber device includes authenticating, in response to said second join request, said access device by said multicast distribution device, and wherein said multicast distribution device does not authenticate said one of said subscriber devices (ID information is used to transfer messages to and from the correct CPE (column 2, lines 43-56, Araujo). In addition, Araujo's design allows for PPP connections between multicast source end (equivalent to multicast distribution device) and the intermediate device (equivalent to access device) (column 2, lines 21-56, Araujo). PPP connections feature authentication if desired).

2. With regards to claims 2, 8, 29 and 43, Araujo teaches, a communication system wherein the multicast distribution device distributes multicast information for a number

of multicast groups (column 2, lines 43-56, Araujo), and wherein each access device uses a predetermined multicast group management protocol to join the multicast group on behalf of the subscriber devices at its respective subscriber location (column 6, lines 40-44, Araujo).

3. With regards to claims 3, 30, 31, 44 and 45, Araujo teaches, a communication system wherein the predetermined multicast group management protocol is an Internet Group Management Protocol (IGMP) (column 11, lines 16-18, Araujo).

4. With regards to claim 6, Araujo teaches, a communication system wherein each access device is coupled to a separate interface of the multicast distribution device (column 6, lines 4-25, Araujo).

5. With regards to claim 7, Araujo teaches, a communication system wherein the multicast distribution device identifies each access device based upon the interface to which the access device is coupled (column 2, lines 43-56, Araujo).

6. With regards to claim 9, Araujo teaches, a communication system wherein the multicast distribution device sends multicast information to the access devices based upon multicast group memberships of the access devices (column 2, lines 43-56, Araujo).

7. With regards to claim 10, Araujo teaches, a communication system, wherein each access device distributes multicast information received from the multicast distribution device to its respective subscriber devices (column 2, lines 43-56, Araujo).

8. With regards to claims 11 and 27, Araujo teaches, a communication system wherein the multicast distribution device maintains accounting information for each subnetwork (column 2, lines 43-50 (join messages include ID information) and column 11, lines 42-61, Araujo).

9. With regards to claim 12, Araujo teaches, a communication system wherein the accounting information comprises multicast group memberships for each subnetwork (column 2, lines 21-56 and column 11, lines 56-61, Araujo).

10. With regards to claim 13, Araujo teaches, a communication system wherein the accounting information comprises duration for each multicast group membership for each subnetwork (column 11, lines 56-61, Araujo).

11. With regards to claim 14, Araujo teaches, a communication system wherein the accounting information comprises a volume of multicast information for each multicast group membership for each subnetwork (column 11, lines 42-61, Araujo).

12. With regards to claim 17, Araujo teaches, an access control method (a system can be a method) wherein authenticating the access device by the multicast distribution device comprises: identifying the access device by the multicast distribution device (ID information is used to transfer messages to and from the correct CPE (column 2, lines 43-56, Araujo). Plus, Araujo's design allows for PPP connections between nodes (column 2, lines 21-56, Araujo). PPP features authentication).

13. With regards to claim 18, Araujo teaches, an access control method (a system can be a method) wherein the access device is coupled to an interface of the multicast distribution device, and wherein identifying the access device by the multicast distribution device comprises: identifying the access device based upon the interface over which the second join request is received by the multicast distribution device (Plus, Araujo's design allows for PPP connections between nodes (column 2, lines 21-56, Araujo). PPP features authentication).

14. With regards to claim 19, Araujo teaches, an access control method (a system can be a method) authenticating the access device by the multicast distribution device comprises: authenticating the access device using a predetermined authentication scheme (Araujo's design allows for PPP connections between nodes (column 2, lines 21-56, Araujo). PPP features authentication).

15. With regards to claim 20, Araujo teaches, an access control method (a system can be a method) wherein the predetermined authentication scheme comprises IPsec AH (Various protocols are applicable to Araujo's design (column 3, lines 14-30, Araujo)).

16. With regards to claim 21, Araujo teaches, an access control method (a system can be a method) further comprising:

- Determining by the multicast distribution device that the access device is authentic (Araujo's design allows for PPP connections between nodes (column 2, lines 21-56, Araujo). PPP features authentication); and
- Establishing a multicast group membership for the access device by the multicast distribution device (column 2, lines 43-56, Araujo).

17. With regards to claim 22, Araujo teaches, an access control method (a system can be a method) further comprising:

- Determining by the multicast distribution device that the access device is not authentic (Araujo's design allows for PPP connections between nodes (column 2, lines 21-56, Araujo). PPP features authentication); and
- Denying a multicast group membership for the access device by the multicast distribution device (It is inherent that when authentication fails, access is denied).

18. With regards to claim 23, Araujo teaches, an access control method (a system can be a method) wherein associating the first subscriber device with the multicast group by the access device comprises:

- Maintaining by the access device a list of subscriber devices associated with the multicast group (Araujo's design allows for PPP connections between nodes (column 2, lines 21-56, Araujo). PPP features authentication); and
- Adding the first subscriber device to the list of subscriber devices associated with the multicast group (column 2, lines 43-56, Araujo).

19. With regards to claim 24, Araujo teaches, an access control method (a system can be a method) further comprising: leaving the multicast group by the first subscriber device; leaving the multicast group by the access device on behalf of the first subscriber device; and disassociating the first subscriber device from the multicast group by the access device (It is inherent that since joining means are present that leaving means are also present (column 6, lines 40-57, Araujo)).

20. With regards to claim 25, Araujo teaches, an access control method (a system can be a method) further comprising:

- Joining the multicast group by a second subscriber device, wherein joining the multicast group by the second subscriber device comprises: sending a third join request by the second subscriber device to the access device using

a third multicast group management protocol (column 6, lines 40-57, Araujo); and

- Associating the second subscriber device with the multicast group by the access device (column 2, lines 21-56, Araujo).

21. With regards to claim 26, Araujo teaches, an access control method (a system can be a method) further comprising: leaving the multicast group by one of the first subscriber device and the second subscriber device; remaining joined to the multicast group by the access device on behalf of the remaining subscriber device; and disassociating said one of the first subscriber device and the second subscriber device from the multicast group by the access device (It is inherent that since joining means are present that leaving means are also present (column 6, lines 40-57, Araujo)).

22. With regards to claims 32, 33, 46 and 47, Araujo teaches, an apparatus (a system can be an apparatus and a program) wherein the membership logic is operably coupled to associate the first multicast group memberships with the second multicast group memberships (column 2, lines 43-56 and column 11, lines 56-61, Araujo).

23. With regards to claims 34 and 48, Araujo teaches, an apparatus (a system can be an apparatus and a program) wherein the first multicast group management logic is operably coupled to receive a join request from a subscriber device for joining a multicast group (column 2, lines 43-56, Araujo).

24. With regards to claims 35 and 49, Araujo teaches, an apparatus (a system can be an apparatus and a program) wherein the second multicast group management logic is operably coupled to join the multicast group on behalf of the first subscriber device (column 2, lines 21-56, Araujo).

25. With regards to claims 36 and 50, Araujo teaches, an apparatus (a system can be an apparatus and a program) wherein the membership logic is operably coupled to associate the first subscriber device with the multicast group (column 2, lines 43-56, Araujo).

26. With regards to claims 37, 38, 51 and 52, Araujo teaches, an apparatus (a system can be an apparatus and a program) wherein the first multicast group management logic is operably coupled to determine that a subscriber device has left a multicast group (It is inherent that since joining means are present that leaving means are also present (column 6, lines 40-57, Araujo)).

27. With regards to claims 39 and 53, Araujo teaches, an apparatus (a system can be an apparatus and a program) wherein the second multicast group management logic is operably coupled to determine whether there are any remaining subscriber devices associated with the multicast group based upon the membership information maintained by the membership logic (column 2, lines 43-56 and column 11, lines 56-61, Araujo).

28. With regards to claims 40 and 54, Araujo teaches, an apparatus (a system can be an apparatus and a program) wherein the second multicast group management logic is operably coupled to remain a member of the multicast group upon determining that there is at least one remaining subscriber device associated with the multicast group (column 2, lines 43-56 and column 11, lines 56-61, Araujo).

29. With regards to claims 41 and 55, Araujo teaches, an apparatus (a system can be an apparatus and a program) wherein the second multicast group management logic is operably coupled to leave the multicast group upon determining that there are no remaining subscriber devices associated with the multicast group (It is inherent that since joining means are present that leaving means are also present (column 6, lines 40-57, Araujo)).

30. With regards to claim 56, Araujo teaches, a program embodied in a computer readable medium (column 8, lines 14-29, Araujo).

31. With regards to claim 57, Araujo teaches, a program embodied in a data signal (column 8, lines 14-29, Araujo).

Remarks

The amendment received on May 22, 2006 has been carefully examined but is not deemed fully persuasive. The following are the examiner's response to the applicant's remarks. The newly amended independent claims feature the authentication traits of the now cancelled claim 16. The applicant contends that since the network in Araujo's disclosure uses PPP and that authentication is optional in PPP, authentication means are not present as claimed. Applicant further contends that if PPP were considered to include authentication, then authentication would necessarily have to be performed on each PPP connection in the Araujo system. This assertion would mean that authentication is performed between the multicast source device (multicast distribution device) and the end stations (subscriber devices), instead of having authentication between the multicast source device (multicast distribution device) and the intermediate device (access device). The examiner disagrees with these assertions. Araujo's teachings allow for PPP connections between the multicast source device (multicast distribution device) and the intermediate device (access device) (column 2, lines 36-41, Araujo). With PPP, authentication can be applied if desired to this connection (between the intermediate and the multicast source devices) while applying no authentication in the other PPP connection within Araujo's design. That means no authentication need occur between the end stations (subscriber devices) and the intermediate device (access device). RFC 1661 further explains how authentication within PPP can be applied or not applied.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azizul Choudhury whose telephone number is (571) 272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC

JASON CARDONE
SUPERVISORY PATENT EXAMINER